

## **I Claim:**

1. A fast and convenient operation structure of a screwdriver head socket mainly comprises an axial shaft, one end of said axial shaft having a socket for inserting a screwdriver head, its other end having a connecting section, a trough connecting outward is disposed on the inner surface of said socket at a suitable location;

an inner bushing is sleeved on said trough of said axial shaft at a suitable location, a ball hole is disposed on said inner bushing in corresponding to said trough for placing a positioning element;

a sliding socket element is sleeved on said axial shaft and also cover said inner bushing, a pressing flange part and a retracting flange part are in neighboring to each other, which are also in sectional flange structure, are formed on said sliding socket element in corresponding to said positioning element, an elastic element is disposed between said sliding socket element and said inner bushing;

one end of said positioning element is being pressed by said pressing flange part of said sliding socket element, and another end is slightly protruded outside said trough, which is on the path of said screwdriver head being inserted into said socket, when said screwdriver head is inserted into said socket, said positioning element is being pressed and falls into said retracting flange part, after said screwdriver is positioned, said positioning element is then returned back to its original position by elastic force of said elastic element, at the same time, the outer edge of said

positioning element is pressed against a concave positioning trough of the screwdriver head, thus to provide a convenient structure for inserting and taking out of said screwdriver head by using only one hand.

5           2. A fast and convenient operation structure of a screwdriver head socket as claimed in Claim 1, said axial shaft having a stopping ring disposed on its outer circumference for accurate and stable positioning of said inner bushing.

10           3. A fast and convenient operation structure of a screwdriver head socket as claimed in Claim 1, said sliding socket element can be formed by an inner shaft sleeve and an outer shaft sleeve, said inner shaft sleeve is sleeved on the back of said elastic element so that said elastic element can press  
15 against on its outer edge, said outer shaft sleeve is sleeved on said inner shaft sleeve, said pressing flange part and said retracting flange part are formed on the inner surface of said outer shaft sleeve at suitable locations.

20           4. A fast and convenient operation structure of a screwdriver head socket as claimed in Claim 1, said concave positioning trough of said screwdriver head can be disposed at each angle of its hexagonal angles are around its hexagonal circumference.

25           5. A fast and convenient operation structure of a screwdriver head socket as claimed in Claim 1, said trough can

be formed by milling at one of the hexagonal angles of said socket of said axial shaft, in corresponding to the structure of said concave positioning trough disposed at each angle of said screwdriver head's hexagonal angles.

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6. A fast and convenient operation structure of a screwdriver head socket as claimed in Claim 1, said trough can be formed at one of the hexagonal sides of said socket of said axial shaft, in corresponding to the structure of said concave positioning trough disposed on each side of said screwdriver head's hexagonal circumference.

7. A fast and convenient operation structure of a screwdriver head socket as claimed in Claim 1, an elastic body and an attraction body can be placed inside said socket of said axial shaft on the opposite direction of said screwdriver head, said attraction body can be fixed on one end of said elastic body, when said screwdriver head is inserted into said socket, it can be attracted by said attraction body, when the locking mechanism locking the screwdriver head by said positioning element disappeared, said elastic body can bounces out said screwdriver head from said socket.

8. A fast and convenient operation structure of a screwdriver head socket as claimed in Claim 1, said positioning element is a steel ball.

9. A fast and convenient operation structure of a screwdriver head socket as claimed in Claim 1 or Claim 2, said sliding socket element can be formed by an outer shaft sleeve and a positioning ring, said outer shaft sleeve having a  
5 positioning trough disposed on the inner surface at its end for said positioning ring to hook on, when said outer shaft sleeve is sleeved on said axial shaft, the both ends of said elastic element are being pressed between said inner bushing and said  
positioning ring, said pressing flange part and said retracting  
10 flange part are formed on the inner surface of said outer shaft sleeve.

10. A fast and convenient operation structure of a screwdriver head socket comprises an axial shaft, its one end  
15 having a socket for inserting said screwdriver head, an inner bushing, a sliding socket element and a positioning element are disposed outside said axial shaft, an extended groove is disposed inside and connected to said socket for placing an elastic body and an attraction body, when said screwdriver head  
20 is inserted into said socket, said elastic body is being pressed against and said screwdriver head is attracted by said attraction body, when said screwdriver head is being released from the locking mechanism, said elastic body can bounces said  
screwdriver head outside said socket, said attraction body can  
25 prevent said screwdriver head from falling to the ground by its attraction force.

11. A fast and convenient operation structure of a screwdriver head socket as claimed in Claim 10, said inner bushing and said sliding socket element are sleeved on said axial shaft at suitable locations, an elastic element is disposed  
5 between said inner bushing and said sliding socket element, said positioning element is disposed on a steel ball hole of said inner bushing, when said screwdriver head is inserted into said socket, said positioning element can lock on a concave positioning trough disposed on said screwdriver head.

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12. A fast and convenient operation structure of a screwdriver head socket as claimed in Claim 10, said attraction body can be fixed on one end of said elastic body.

15 13. A fast and convenient operation structure of a screwdriver head socket as claimed in Claim 10 and Claim 12, said attraction body can be disposed in a hole on the inner surface of said socket at a suitable location.

20 14. A fast and convenient operation structure of a screwdriver head socket as claimed in Claim 10, said sliding socket element can be formed by an inner shaft sleeve and an outer shaft sleeve, said inner shaft sleeve is sleeved on the back of said elastic element so that said elastic element can press  
25 against on its outer edge, said outer shaft sleeve is sleeved on said inner shaft sleeve, a pressing flange part and a retracting flange part are in neighboring to each other, which are also in

sectional flange structure, are formed on the inner surface of said outer shaft sleeve in corresponding to said positioning element.

5        15. A fast and convenient operation structure of a screwdriver head socket as claimed in Claim 10 or Claim 14, said sliding socket element can be formed by an outer shaft sleeve and a positioning ring, said outer shaft sleeve having a positioning trough disposed on the inner surface at its end for  
10 said positioning ring to hook on, when said outer shaft sleeve is sleeved on said axial shaft, the both ends of said elastic element are being pressed between said inner bushing and said positioning ring.

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